

**Bad (C-7): sc-8044**

The Power to Question

**BACKGROUND**

The Bcl-2 family of proteins is characterized by its ability to modulate cell death (apoptosis) under a broad range of physiologic conditions. Bcl-2 and several related proteins function to inhibit apoptosis, while other members of the Bcl-2 family, such as Bax and Bak, enhance cell death under various conditions. For instance, Bcl-x<sub>L</sub> represses cell death, while its shorter form, Bcl-x<sub>S</sub>, promotes apoptosis. A protein designated Bad exhibits homology to Bcl-2, limited to the BH1 and BH2 domains. Bad functions to dimerize with Bcl-x<sub>L</sub> and with Bcl-2, but not with Bax, Bcl-x<sub>S</sub>, Mcl-1, A1 or itself. In mammalian cells, Bad binds with greater affinity to Bcl-x<sub>L</sub> than to Bcl-2, and reverses the death repressor activity of Bcl-x<sub>L</sub> but not Bcl-2. Dimerization of Bad with Bcl-x<sub>L</sub> results in displacement of Bax from Bcl-x<sub>L</sub>: Bax complexes, thereby causing restoration of Bax-mediated apoptosis.

**CHROMOSOMAL LOCATION**

Genetic locus: BAD (human) mapping to 11q13.1; Bad (mouse) mapping to 19 A.

**SOURCE**

Bad (C-7) is a mouse monoclonal antibody raised against amino acids 1-168 representing full length Bad of human origin.

**PRODUCT**

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Bad (C-7) is available conjugated to agarose (sc-8044 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-8044 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-8044 PE), fluorescein (sc-8044 FITC), Alexa Fluor® 488 (sc-8044 AF488), Alexa Fluor® 546 (sc-8044 AF546), Alexa Fluor® 594 (sc-8044 AF594) or Alexa Fluor® 647 (sc-8044 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-8044 AF680) or Alexa Fluor® 790 (sc-8044 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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**APPLICATIONS**

Bad (C-7) is recommended for detection of Bad of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

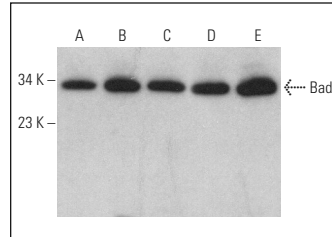
Suitable for use as control antibody for Bad siRNA (h): sc-29778, Bad siRNA (m): sc-29779, Bad shRNA Plasmid (h): sc-29778-SH, Bad shRNA Plasmid (m): sc-29779-SH, Bad shRNA (h) Lentiviral Particles: sc-29778-V and Bad shRNA (m) Lentiviral Particles: sc-29779-V.

Molecular Weight of Bad: 25 kDa.

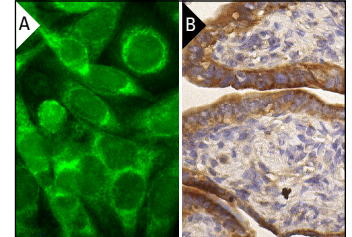
Positive Controls: ARPE-19 whole cell lysate: sc-364357, PC-3 cell lysate: sc-2220 or C2C12 whole cell lysate: sc-364188.

**STORAGE**

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

**DATA**

Bad (C-7): sc-8044. Western blot analysis of Bad expression in ARPE-19 (A), PC-3 (B), C2C12 (C), A-10 (D) and C6 (E) whole cell lysates.



Bad (C-7) Alexa Fluor® 488: sc-8044 AF488. Direct immunofluorescence staining of formalin-fixed SW480 cells showing mitochondrial and cytoplasmic localization. Blocked with UltraCruz® Blocking Reagent: sc-516214 (A). Bad (C-7): sc-8044. Immunoperoxidase staining of formalin fixed, paraffin-embedded human fallopian tube tissue showing cytoplasmic staining of glandular cells (B).

**SELECT PRODUCT CITATIONS**

- Fischer, R., et al. 2001. Expression of the peripheral-type benzodiazepine receptor and apoptosis induction in hepatic stellate cells. *Gastroenterology* 120: 1212-1226.
- Wang, L., et al. 2018. Pan-HDAC inhibition by panobinostat mediates chemosensitization to carboplatin in non-small cell lung cancer via attenuation of EGFR signaling. *Cancer Lett.* 417: 152-160.
- Suh, D.S., et al. 2018. LRIG2 is a growth suppressor of Hec-1A and Ishikawa endometrial adenocarcinoma cells by regulating PI3K/AKT- and EGFR-mediated apoptosis and cell-cycle. *Oncogenesis* 7: 3.
- Roy, S., et al. 2018. GLA supplementation regulates PHD2 mediated hypoxia and mitochondrial apoptosis in DMBA induced mammary gland carcinoma. *Int. J. Biochem. Cell Biol.* 96: 51-62.
- Eid, R.A., et al. 2018. Ghrelin prevents cardiac cell apoptosis during cardiac remodelling post experimentally induced myocardial infarction in rats via activation of Raf-MEK1/2-ERK1/2 signalling. *Arch. Physiol. Biochem.* 15: 1-11.
- Luan, Y.P., et al. 2018. Tsoong induces apoptosis and inhibits proliferation, migration and invasion of pancreatic ductal adenocarcinoma cells. *Mol. Med. Rep.* 17: 3527-3536.
- Wang, D., et al. 2018. Antiproliferative effects of the CDK6 inhibitor PD0332991 and its effect on signaling networks in gastric cancer cells. *Int. J. Mol. Med.* 41: 2473-2484.
- Chiang, J.T., et al. 2018. Anti-apoptosis and anti-fibrosis effects of *Eriobotrya japonica* in spontaneously hypertensive rat hearts. *Int. J. Mol. Sci.* 19 pii: E1638.

**RESEARCH USE**

For research use only, not for use in diagnostic procedures.